

Zero Waste Field Trips



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Snapshot

Field trips are a fun, effective way to introduce students to the Zero Waste initiatives happening in their own community.

<https://bit.ly/eco-cycle-zero-waste-schools-guide>

Objective: Students will learn how real-world composting, recycling, and other Zero Waste community programs function.

Age Groups: K-12th grade

Setting: Various community facilities

Project Duration:

- Planning: 2-4 hours
- Field Trip: 4-5 hours

Materials:

- Permission slips
- Class list
- First aid kit and student medications
- Worksheets (1 per student)
- Pencils (1 per student)
- Clipboards

Why This Project Matters:

Because so many of the real-world Zero Waste processes happen unseen in our daily lives, a field trip offers participants the chance to witness authentic examples of recycling, composting, and/or other waste-reduction initiatives. Waste issues become real to students, potentially inspiring them to make positive changes in their recycling and composting habits, and in their interactions with packaging, containers, and other solid waste.

Project Summary:

The field trips below give examples of the range of Zero Waste facilities available nationwide for touring. While the infrastructure of communities will vary, similar sites may exist in your area.

Implementation:

1. Plan the field trip at least one month in advance to allow ample time for school district buses to be reserved and/or parent volunteers to be recruited for carpools.
2. Field trips are designed for one class at a time (approximately 30 students). A small group size allows more opportunities for students to see better, hear more, and ask questions. However, all these field trips may be adjusted to accommodate larger groups.
3. Research local facilities and companies that are contributing to the Zero Waste movement. These may include waste hauling companies, compost facilities, environmental/waste management divisions of local government, recycling centers, landfills, grocery stores, used-building-supply sites, local businesses practicing Zero Waste, and recycling factories. See below for suggested combinations of stops to create a cohesive field trip.



4. Contact sites of interest with potential tour dates and times. Inquire if the tour will have a guide or be self-guided.
5. Once a date and times are scheduled for each stop, arrange transportation (school bus, city bus, parent carpool, etc.).
6. Follow the school district's policies for field trips. Contact sites if liability waivers must be signed.
7. Recruit adult chaperones for the field trip (one adult per 5-6 students). Check to see if any of the facilities have requirements for adult-to-student ratios.
8. Before the field trip, conduct a lesson to build students' background knowledge on the places they will be visiting. See below for suggested topics to cover. At the end of the lesson, explain the field trip itinerary, appropriate dress for the day (based on weather and safety), lunchtime procedures, behavior expectations, and what to bring.
9. Thoroughly review safety procedures for each location.
10. Prepare a student worksheet for the field trip including several questions specific to each facility. A worksheet helps focus students' attention and can serve as an evaluation of their learning.

Below are suggested field trip topics and sites to visit:
(Two to three sites can usually be visited in 4-5 hours. This includes time for transportation, lunch, and bathroom breaks.)

Trip focus: dealing with waste wisely (K-12th grade)

- Background information:
 - the environmental benefits of recycling
 - the difference between *reuse* and *recycle*
 - items that can be recycled at home and at school
- Facilities to visit:
 - recycling drop-off center
 - materials recovery facility (MRF) for sorting of recyclables
 - local building materials reuse center (ex: Habitat for Humanity's ReStore) or another local reuse store
 - special recycling center (for specific materials such as metal, batteries, household chemicals, tires, or paint)

Extensions:

- As a follow-up activity, have students write a thank you letter to each location including three or more things they learned at the site.
- Have high school students interview a local business owner on their waste-reduction practices.
- For a student group who supports their school's Zero Waste programs, provide this field trip at the beginning of the year to enhance their background knowledge for the work they will be doing all year long. Another option is to provide the trip at the end of the school year as a reward for their hard work.



Trip focus: waste alternatives and awareness (3rd-12th grade)

- Background information:
 - general solid waste facts
 - how a landfill is designed and operates
 - items that can be recycled at home and school
 - how to “pre-cycle” (choose products in packages that can be reused or recycled, that are non-toxic, or that minimize packaging with bulk buying)
- Facilities to visit:
 - grocery store to conduct a scavenger hunt for less wasteful products (see sample worksheet below)
 - local landfill or solid waste transfer station
 - MRF or recycling drop-off center



Trip focus: community agriculture/composting (K-12th grade)

- Background information:
 - organic vs. conventional farming
 - how the composting process works
 - examples of compostables and non-compostables
- Facilities to visit:
 - community gardens (where compost is being used)
 - agricultural heritage center/farm museum to learn how earlier generations of farmers employed waste-free living
 - organic farm (that utilizes compost as fertilizer)
 - industrial or large-scale composting facility

Trip focus: Zero Waste practices by businesses (high school)

- Background information:
 - define the term Zero Waste
 - highlight companies around the community and around the state/country/world that implement Zero Waste and other environmentally friendly initiatives
- Facilities to visit:
 - three businesses that are implementing the above (select a variety of types)



Assessment:

Review students’ worksheets from the field trip to assess their understanding.

Related Activities:

Reinforcing Collection Programs Over Time – Chapter 27

Sample Scavenger Hunt to Teach Pre-Cycling Concepts

Below is the answer key to a sample *Pre-Cycling Grocery Store Scavenger Hunt Worksheet*. It is identical to the scavenger hunt that students would follow, but it includes answers.

Here are the procedures to follow for a setting up the activity:

- Students are divided into small groups of 5 or less, each with an adult chaperone.
- Each student group is given one copy of the scavenger hunt along with a clipboard and pencils. Students take turns recording answers.
- Each chaperone is given one copy of the answer key to the scavenger hunt to check students' work for accuracy. *(Answers are in green.)*
- Students are reminded of expectations for appropriate behavior in a place of business and rules are established around picking items up from the shelves. (It is best to avoid touching items unless given permission by the adult chaperone. Items must be returned to their places on the shelves exactly as they were found.) Buying groceries or eating during the scavenger hunt is not allowed.
- Go over the seven principals of pre-cycling with the entire group. Establish a meeting place and time that the scavenger hunt will conclude. Communicate this to each group and their chaperone.
- Each group begins the scavenger hunt in a different area/aisle of the store to prevent overcrowding, avoiding areas where other student groups are gathered.

Pre-Cycling Grocery Store Scavenger Hunt Worksheet

Answer the questions below with your group. Discuss each purchasing choice.

Stay with your adult chaperone at all times.

Remember, pre-cycling means shopping with the earth in mind!

Pre-cycling means buying products that are non-toxic, use fewer of the earth's natural resources, and create less trash or pollution. Here are some tips!

- Buy in bulk, or large quantities, to reduce packaging.
- Avoid products with extra layers of packaging.
- Look for containers you can reuse.
- Look for containers you can recycle.
- Look for packaging made of recycled materials.
- Avoid disposables. Buy things that last.
- Buy the least toxic (poisonous) product.



PRODUCE (aisle/location in store)

- How can you use less packaging when buying fruits and vegetables?
Reuse plastic bags, use cloth or mesh bags, and avoid using bags when possible.

BULK FOODS (aisle/location in store)

- Find the bulk bins in the store where you can buy products like nuts, flour, beans, and rice. How would you package foods from these bins in a way that reduces waste?
Cloth or mesh bags, bags from home, reusable containers
- How does using only one layer of packaging benefit the earth?
Less trash in landfills, fewer natural resources used, less energy used to produce packages
- Could these packages be used again? Yes
- Name one thing you would like to buy from these bins.
Answers will vary.



BAKING PRODUCTS (aisle/location in store)

- Locate the flour. List the unit price per ounce of one brand that has different sizes (Find the price tag on the shelf and look for the smaller number in the bottom left corner of the tag).

Size	Unit Price Per Ounce
5-lb. bag of flour	
10-lb. bag of flour	

- Which size bag has the cheapest flour per ounce? The 10-lb. bag
- Which bag(s) uses less packaging if you need a total of 10 pounds of flour?
One 10-lb. bag uses less packaging than two 5-lb. bags.

SOUP (aisle/location in store)

- List two kinds of containers for packaging soup:
Steel cans, paper cartons (aseptic), Styrofoam
- What natural resource do you think each container is made from?
Steel = rocks/ore, paper = trees, Styrofoam = oil (petroleum)
- Which container can be recycled again and again? Steel cans



CEREAL (aisle/location in store)

- List 3 brands of cereal packaged in recycled paperboard. (*Hint: Look on box tops and bottoms.) Any brand marked “made from recycled materials.”
- Can these packages be recycled again when you’re done with them?
Yes
- How do you know a package is made from recycled paper?
It will have more than just the recycling symbol. It will say “recycled” in writing.



PAPER PRODUCTS (aisle/location in store)

- Most of the paper items here were made from trees. Find the recycled paper products. (*Hint: They will say “made from recycled paper” on the label.) List them below.
Napkins, tissues, toilet paper, paper towels
- How can you tell if paper products have been recycled? Package will say so.
- What could you use instead of paper towels and paper napkins?
Sponges, cloths, rags

LUNCH CONTAINERS (aisle/location in store)

- Find three ways to pack a sandwich for lunch.
Reusable containers, aluminum foil, plastic bags
- Which of these options could be reused hundreds of times?
Reusable containers (Aluminum foil can be recycled.)



DETERGENT (aisle/location in store)

- Name a brand of detergent that is packaged in a bottle made from at least 25% recycled plastic. Check the labels or bottles
- Now, find a dish soap that is eco-friendly.
(*Hint: Look for the word “biodegradable” on the label.)
Answers may vary.
- Why do you think eco-friendly soap is better for the earth?
It breaks down safely in the environment and doesn’t cause pollution.

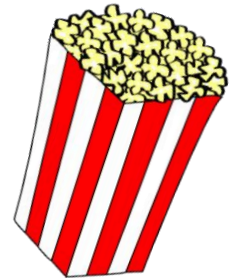


SHAMPOO (aisle/location in store)

- How big (in fluid ounces) is the biggest bottle of shampoo you can find?
39 ounces (Answers may vary.)
- What natural resource do you save when you buy one large plastic bottle instead of several small ones (buying in bulk)? Petroleum (oil)
- Should a plastic cap be recycled separately or attached to an empty bottle?
It should be screwed on to the empty bottle. (Pump or spray tops are trash.)

POPCORN (aisle/location in store)

- Which kind of popcorn package is the best pre-cycling choice?
Plastic bottle with raw kernels (It is reusable AND recyclable.)
- Which popcorn packaging would make the most trash?
Boxes of microwave popcorn (Each serving is individually wrapped.)



JUICE (aisle/location in store)

- List six different kinds of juice drink containers. Put a star (*) by the ones you can recycle. Circle the worst pre-cycling choice(s). (*Hint: Some single-serving containers may not be in this aisle.)

glass bottle*

aluminum can*

plastic bottle*

juice box*

steel can*

juice pouch

- What makes a drink container a good pre-cycling choice?
It is reusable or recyclable.
- Is reusing a container better for the environment than recycling it? Yes

DAIRY (aisle/location in store)

- Which milk containers can you recycle?
Plastic jugs, paper cartons
- Name the natural resource each container is made from.
Plastic = oil, paper = trees



CHECKOUT COUNTER

- Name two things you can do to save natural resources when choosing the kind of shopping bag you use.

Use reusable bags like cloth bags or don't use a bag at all.



CHALLENGE

Discuss and write thoughtful answers to these questions.

What would you do to pre-cycle the next time you go to the store?

Why don't more people pre-cycle when they go to the store?

How would you show someone else how to pre-cycle?
